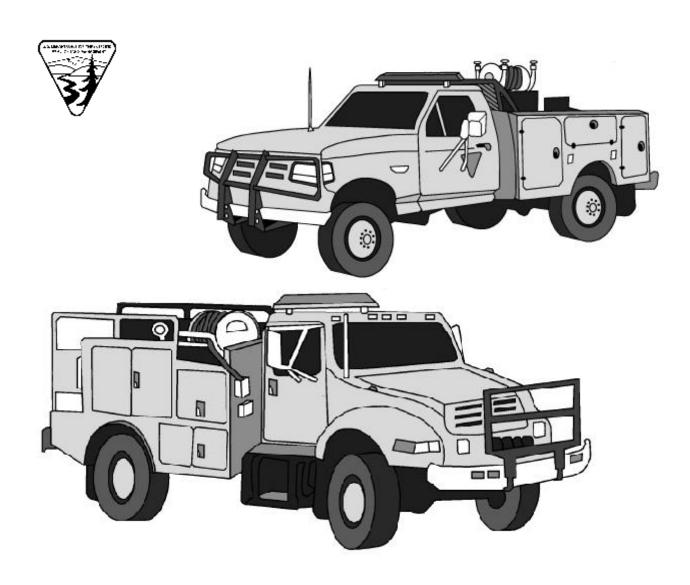
# FIRE ENGINE MAINTENANCE PROCEDURE AND RECORD



LICENSE:
DUTY STATION:
ENGINE IDENTIFICATION NUMBER:

# FIRE ENGINE MAINTENANCE PROCEDURE AND RECORD PREFACE

The Fire Engine Maintenance Procedure and Record book was created by a development group with direction from the National Interagency Fire Center (NIFC) National Fire and Aviation Training Support Group. The primary developers in this effort were:

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The National Fire and Aviation Training Support Group appreciates the efforts of all contributors to the design and development of this product.

Please consider this first year edition (May 1999) as a dynamic document and make recommendations accordingly. Suggestions for improvements or changes are welcome. You may use the evaluation sheet attached with the document.

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FIRE ENGINE MAINTENANCE PROCEDURE AND RECORD COMMENT FORM
Name/Office:
Page Number/Section Comments Relate to:
Subject:
Comments:

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# How To Use the Fire Engine Maintenance Procedure and Record Book

This book has been developed for you to use as a guide to perform routine maintenance on a BLM fire engine. Duties described as "daily," or "as needed" are recommendations by the development group. However, if local protocol dictates that some tasks are done more often, or less, then local standards should be followed. This document is to be used for both the "Heavy" and "Light" engines; some instructions are specific to each type individually. Skip the task if it does not pertain to the engine you are using.

The appendices located in this book are to be used solely as a reference document. Additional copies of the documents to be used in the field can be obtained at the B.L.M. training web page or make copies of the ones provided.

Line number on the Daily Fire Engine Inspection Checklist (Appendix A) corresponds with line number in the Fire Engine Preventative Maintenance Daily Inspection Instructions. Use the instructions as a guide for your Daily Inspection.

The Pump Test Record is included in this guide to provide you an area to document pump performance and trend. There are various methods used in the testing of pump performance, whichever method is used should be consistent and done on a routine basis. The development group does recommend the following pump test:

Using the 1½ overboard discharge nearest to the pump, assemble a 3/4 inch, 3/8 diameter nozzle tip (NFES 0638) on the 1½ discharge. You will need to use the appropriate reducers to do this. With the valve to the 1½ discharge open, throttle the pump to max P.S.I. output. Record the P.S.I. gauge reading in the Pump Test Log. To record maximum (max) pump G.P.M. refer test results to the Water Equipment Handling Guide (Fourth Edition), Appendix 2 (Nozzle Flow Rates.) This test will track pump trend. Any decline in pump P.S.I. output will alert the operator of potential pump problems and/or unacceptable G.P.M. output. The development group selected this test for ease of performing and availability of testing equipment.

# I. FIRE ENGINE AND PUMP PACKAGE DATA

This section needs to be filled out and kept current for the life of the engine. This information is needed by mechanics and engine module members when repairing or servicing the engine.

# **VEHICLE DATA**

LicenseB	Eng1	Make	Model
YearSeria	l No		
Eng: Mfr/Model	Crankca	ase Cap. Qts	Wt
Coolant Cap. Qts	Water Filter	·Air Filt	er(Primary)
Air Filter(Secondary)	Fuel	Filter(Primary)	
Fuel Filter(Secondary	) Oil F	ilter B	Sattery Group
Tire Size	Ply Rating	Pre	essure
Fan Belts	P/S Belt	Alt	ernator Belt
Air Comp. Belt	Other bel	ts	
Transmission Type		Serial No	•
Diff. Type and Ratio			
Buildup Mfg	I	Date Placed In S	Service
PUMP PACKAGE I	DATA		
Pump Make		Model	
Rating		GPM @ 150 PS	SI
Pump Engine Mfg		Mode	el

Crankcase Cap. Qts	Wt	Oil Filter
Air Filter	Fan Belts	Coolant Cap. Qts
Foam Equipment Mak	e	Model
FIRE ENGINE DIM	ENSIONS	
Length	Width	Height
MISCELLANEOUS 1	ENGINE INFOR	MATION
_		_

# II. FIRE ENGINE WEIGHTS

This section needs to be filled out and kept current for the life of the engine. This information is needed, to keep engines at the proper GVW ratings, for Transport (low-boy) operations, or for towing operations.

# FIRE ENGINE WEIGHT (GVW)

Manufactures	Front Axle	Rear Axle	Total
Recommendations			

# FIRE EQUIPPED ENGINE WEIGHT (GVW)

Front Axle	Rear Axle	Total	Date
_			

#### III. RADIO INSTALLATION AND PREVENTATIVE MAINTENANCE

Inspect after installation and at the Annual Inspection. Radio unit should be turned off before mechanical inspection is started.

#### A. TRANSMITTER-RECEIVER (T/R) CHASSIS MOUNTING AREA

- 1. Tighten loose mounting hardware.
- 2. Check that the T/R unit is locked into the housing.
- 3. Check that the cable connector is firmly inserted into the T/R unit connector.
- 4. Check that the antenna cable connector is finger tight.
- 5. Check to see that there is free space around the T/R chassis for ventilation.

#### B. ANTENNA

- 1. Check that the whip is firmly secured.
- 2. Check that the base is firmly mounted.
- 3. If visible, check the cable connections to the base for cleanliness and tightness.

#### C. CONTROL HEAD/SPEAKER

- 1. Tighten loose mounting hardware.
- 2. Check that the cables are routed and secured under the dash in a manner which prevents the operators feet from entanglement with the wires.
- 3. Check for missing or damaged knobs and switches.
- 4. Switches should operate smoothly without jamming.

#### D. MICROPHONE

- 1. Check for frayed cable.
- 2. Push-to-talk button should operate smoothly.
- 3. Microphone hanger should be firmly mounted.

#### E. UNDER THE HOOD

- 1. Check that the wires are protected from exhaust manifold, sharp edges, and moving parts.
- 2. Check connections for cleanliness and tightness.
- 3. Wires passing through the fire wall should be protected from fraying by a grommet in the hole.
- 4. Battery connections should be clean and tight.
- 5. Check condition of fuses and holders.

## IV. INSPECTION AND SERVICE INTERVALS

A system of complete service and inspections covering all operating components of the Fire Engine provides the basic preventative maintenance tool. These inspections and corrective actions are designed for an emergency fleet where use dictates maintenance levels at a much higher degree than conventional oil change and lubrication intervals.

#### A. DAILY FIRE ENGINE INSPECTION

- 1. Periodic/Post Fire
- 2. Pump Maintenance
- B. 3000 MILE SERVICE
- C. ANNUAL SERVICE
- D. WINTERIZATION

#### V. DAILY FIRE ENGINE INSPECTION INSTRUCTIONS

This list of instructions corresponds with the Daily Fire Engine Inspection Checklist found in Appendix A. Use this list as a guide during inspections.

- 1. Oil Check fluid levels and add if needed.
- 2. Coolant Check fluid levels and add if needed.
- 3. Power Steering Check fluid levels and add if needed.

- 4. Automatic Transmission Fluid Check transmission fluid according to manufacturer's guidelines.
- 5. Fan Belts Check belts for wear, frays, tension, or cracks.
- 6. Air Cleaners Carefully inspect mounting brackets, inlet hose connections, and fittings. Inspect gasket and sealing surface areas. Replace service element, if needed.
- 7. Hoses Check for signs of wear, cracks or leaks. Check clamps.
- 8. Leaks Check for signs of dripping fluids around major components of the Fire Engine.
- 9. Batteries Check that battery (s) is secure, connections are tight, cell caps are present. Battery connections should not be excessively corroded. Battery box and cover must be secure.
- 10. Fuel Tank Make sure it is full and securely mounted.
- 11. Hydraulic Oil (if applicable) Check level of fluid; add if needed.
- 12. Air Tanks Check for moisture and bleed if necessary. Inspect mounting brackets.
- 13. Slack Adjusters Inspect for excessive play in the brake assembly (adjust to manufacturer's specifications). Check for broken, loose or missing parts.
- 14. Parking Brake Check for proper operation; ensure vehicle doesn't move when brake is set.
- 15. Air Brake Check Performed in accordance with D.O.T. (CDL) standards.
- 16. Tires Check tread depth and wear, sidewall damage, and tire pressure. Ensure that tires are matched. Check spare. Check condition of mud flaps.

- 17. Hubs and Lug Nuts Check for leaks and proper operation of manual hubs. Inspect rims for damage and proper mounting. Ensure lug nuts are present and tight.
- 18. Undercarriage Check for loose bolts, hanging wires, exhaust system, leaks, broken parts, steering components, drive train, shock absorber, free of debris, springs and spring shackles, body mounts, cross members, etc.
- 19. Cabinet Locks Check for operation.
- 20. General Condition Clean and orderly appearance (both internal and external). Agency emblems, decals, equipment numbers and license plates present and in good condition.
- 21. Start Engine Leave engine running for electrical checks.
- 22. Lights/Signals Check headlights, brake lights, running lights, emergency lights, turn signals, back-up lights, work lights, panel lights, cabinet lights, dome and dash lights, etc. and replace bulbs as necessary.
- 23. Mirrors/Glass Check for cleanliness, cracks, chips, and damaged brackets or mounts. Ensure proper adjustment.
- 24. Back-up Alarm Operational.
- 25. Gauges All gauges should be operational. Any non-functioning gauges should be reported.
- 26. 2-Way Radio/P.A. Perform a radio check to see if radio receives and transmits. Check to see if it is securely mounted and speakers are functional.
- 27. Wipers/Washers Check condition, reservoir level, and operation.
- 28. Horn Check operation, mounting brackets, and air horn.
- 29. Seat Belts Clean, secure, accessible, and operational.

- 30. Heater & AC Check fan, defroster, vents, and controls.
- 31. Log Book Current, neat and available. Check for credit card, receipts and proper charge codes.
- 32. Accident Forms Contained within the DI-135:DI-134, SF-91, SF-94, CA-1, OF-26 and the S-43. Ensure all forms are in the DI-135.
- 33. Fire Extinguisher Securely mounted, pins in place, inspection current, tagged, reflective marker on the extinguisher, and charged.
- 34. First Aid Kit(s) Maintained, updated, and clearly marked.
- 35. Reflector Set Available and operational.
- 36. Wheel Chocks In place and accessible.
- 37. Jack/Lug Wrench Compatible with vehicle and proper sized jack.
- 38. N.U.S Check for missing or damaged items, replace if necessary.

#### VI. PERIODIC/POST FIRE SERVICE INSTRUCTIONS

This list of instructions corresponds with the Daily Fire Engine Inspection Checklist found in Appendix A. Use this list as a guide during inspections.

## **CAB & CHASSIS**

- 1. Differential Oil Level Full of proper weight lubricant. Plugs are tight.
- 2. Transfer Case Oil Level Full of proper weight lubricant. Plugs are tight.
- 3. Check Drive Lines Check for damage and wear.
- 4. Manual Transmission Fluid Full of proper weight lubricant. Plugs are tight.

5. Check N.U.S. - All items specified as minimums in "Standards for Fire Operations" are on board, clean and functional.

#### **PUMP PACKAGE**

- 1. Change Oil and Filter Per manufacturer's specs or local standards (if more stringent.)
- 2. Check Pump Motor Mounts Secure and in place.
- 3. Check Water Tank Mounts Secure and in place.
- 4. Check Spark Plugs Electrode and proper gap; clean; replace as needed.
- 5. Fuel Filter Inspect; replace as needed.
- 6. Inspect Drive Belts Examine for wear, frays or cracks; ensure proper tension.
- 7. Air Cleaner Clean or change as needed.
- 8. General Appearance Clean Pump Package; cooling fins clean.
- 9. Pump Performance Test Perform pump pressure and flow test at discharge nearest to pump; record results.
- 10. Lubricate Pump Head Per manufacturer's specs or local standards (if more stringent.)
- 11. Foam Proportioner Check operation, follow manufacturers guidelines for flushing and maintenance. Refill with foam if needed.

#### VII. PUMP MAINTENANCE SERVICE INSTRUCTIONS

This list of instructions corresponds with the Daily Fire Engine Inspection Checklist found in Appendix A. Use this list as a guide during inspections.

#### **DAILY:**

- 1. Check oil levels; add if needed.
- 2. Inspect primary and secondary air filters; clean or replace as needed.
- 3. Inspect and lubricate throttle and choke cables.
- 4. All gauges operational; panel lights working.
- 5. Pressure shutdown switch operational.
- 6. Fuel tank full; Check for debris and rust.
- 7. All valves operational.
- 8. Coolant levels correct.

#### **AS NEEDED:**

- 1. Lubricate pump head and hose reel per manufacturer's specifications.
- 2. Lubricate valve controls.

## **POST-FIRE:** (Conduct daily check plus items below)

- 1. Flush foam system.
- 2. Refill foam system.
- 3. Examine strainer; clean if needed.
- 4. Fill fuel tank.
- 5. Clean pump package thoroughly.

#### **MONTHLY:**

- 1. Change oil and filter per manufacturer's specifications.
- 2. Inspect spark plugs; replace as needed.
- 3. Inspect fuel filter; replace as needed.
- 4. Inspect drive belt; replace as needed (for belt-driven models.)
- 5. Clean/replace air filter.
- 6. Clean unit thoroughly, i.e., fan housing, etc.
- 7. Conduct pump performance test (flow test and/or pressure test.)

#### VIII. 3,000 MILE SERVICE

It is highly recommended that service intervals be reduced as conditions warrant (post-fire, severe conditions, etc.)

#### A. OIL CHANGE

Drain main engine, auxiliary engine, and pump gear boxes which use oil. Fill crankcases and gear boxes with correct type and grade of oil. Capacities are noted on the Fire Engine Data page. Oil changes should be made when the engine is warm.

#### B. OIL FILTER

<u>Canister Type:</u> Drain canister, remove dirty filter cartridge and discard, thoroughly clean canister. Install new filter cartridge, install new cover gasket (lubricate gasket surface lightly), examine carefully for leaks with engine running. Add oil if necessary.

<u>Spin-On Type:</u> Remove spin-on type filter assembly and discard. Thoroughly clean filter base. Install new filter assembly after lubricating gasket surface lightly. Examine carefully for leaks with engine running. Add oil if necessary. **Do not over-tighten spin-on type oil filters.** 

#### C. LUBRICATION

Lubricate entire chassis. Check oil level in all transmissions, transfer cases, differentials, steering gear boxes, hydraulic tanks and pump primer reservoir. Lubricate door locks, striker plates, hinges, engine accessories, fire pump and pump engine accessories. Check pump gear boxes and electric two-speed axles. Before lubricating front axle, raise front of vehicle off the ground. **Do not lubricate front axle steering knuckles on four-wheel drive vehicles**.

#### D. AIR CLEANER

Carefully inspect mounting brackets, inlet hose connections, and fittings. Inspect gasket and sealing surface areas. Clean or replace service element.

#### E. FUEL SYSTEM

Service water separator as per manufacturers recommendations. Change fuel filters annually or more often under severe conditions.

# IX. ANNUAL SERVICE (Refer to Appendix B for Form 1520-35)

#### A. PRE-INSPECTION ROAD TEST

This should include driving the vehicle, foot brake, parking brake, steering, starter, transmission, clutch, gauges noises.

#### B. WHEEL BEARINGS AND HUBS

Clean, inspect, and re-pack wheel bearings and hubs. Check wheel seals for leaks or damage. Perform at intervals recommended by the manufacturer or more often under severe conditions.

#### C. AXLES AND DIFFERENTIALS

Drain and refill with correct lubricants to the proper level. Visually check ring gears, pinion gear, and differential side gears.

#### D. TRANSFER CASE AND TRANSMISSION

Drain and refill with correct lubricant to proper level. Inspect mounts and seals.

Manual Transmission and Transfer Case - remove inspection plates; visually inspect gears and bearings. Inspect and adjust clutch as needed.

Automatic Transmission - Remove pan, inspect transmission, and service all filters.

#### E. DRIVE LINES AND U-JOINTS

Clean, inspect, lubricate, balance or replace as per manufacturer's recommendations or as severity of conditions dictate.

#### F. STEERING COMPONENTS

Inspect steering gear box, steering components, lubricate and replace seals as needed.

#### G. BRAKES

Examine brake lining and drums, pads and rotors, wheel cylinders, master cylinder, brake booster, Accumulock (where applicable), examine brake compressor, mounts, air lines, parking brake cable, and parking brake lining. Inspect "S" cam, shaft, and bushings for wear, inspect wedge assemblies and airbrake chambers and repair as required. Inspect all brake components and repair as required. Adjust all brakes.

#### H. ENGINE TUNE-UP

Check emission control systems and repair as required to bring the vehicle into compliance. Major engine tune-up to be performed as severity of conditions dictate or as per the manufacturer's preventative maintenance recommendations. Check fuel delivery systems; clean, overhaul or adjust as required. Replace fuel filters and water separator filter annually or more often under severe conditions. Check turbocharger.

#### I. COOLING SYSTEM

Examine radiator, hose connections, coolant recovery tank and water pump for leaks. Check fan belt for wear and adjustment. Clean radiator core (external) if dirty. Examine radiator pressure cap. Check condition of coolant. Examine automatic transmission heat exchanger oil lines for leaks or damage. Change coolant filter, if applicable.

Coolant <u>must</u> be changed and flushed every two years. If engine overhauled, radiator shall be removed and completely overhauled.

#### J. FRAME AND SUSPENSION

Visually inspect fire package mounting brackets, springs, mounts, shocks, hangers and replace as needed. Perform four-wheel alignment.

#### K. EXHAUST SYSTEM

Check and inspect exhaust system.

#### L. AIR CONDITIONING SYSTEM

Inspect and recharge as necessary.

## M. POST-VEHICLE INSPECTION ROAD TEST

# Additional services may be necessary according to operator's manual

X. WINTERIZATION INSTRUCTIONS (Refer to Appendix C for Winterization Checklist)

Winterization process should be followed any time the Fire Engine is exposed to freezing temperatures. During short periods of exposure to freezing conditions a full winterization need not be completed, however some precautions need to be taken to prevent damage to the pump and plumbing. Full winterization is for periods of prolonged exposure.

# **APPENDIX A**



# **Department of the Interior • Bureau of Land Management**

# **ENGINE #:**

#### DAILY FIRE ENGINE INSPECTION CHECKLIST

	DAILI	I IIVE ENGII	NE INSPECT	IOIT OIILOI	LIGI	
DATE						
MILEAGE						
Cab & Chassis						
1. Oil						
2. Coolant						
3. Power Steering						
4. Automatic Transmission Fluid						
5. Fan Belts						
6. Air Cleaners						
7. Hoses						
8. Leaks						
9. Batteries						
10. Fuel Tank Full						
11. Hydraulic Oil						
12. Air Tanks						
13. Slack Adjusters						
14. Parking Brake						
15. Air Brake Check						
16. Tires						
17. Hubs/Lug Nuts						
18. Undercarriage						
19. Cabinet Locks						
20. General Condition						
21. Start Engine						
Remarks						

		1	1		
22. Lights/Signals					
23. Mirrors/Glass					
24. Back-up Alarm					
25. Gauges					
26. 2-Way Radio/P.A.					
27. Wipers/ Washers					
28. Horn					
29. Seat Belts					
30. Heater/AC					
31. Log Book					
32. Accident Forms					
33. Fire Extinguisher					
34. First Aid Kit					
35. Reflector Set					
36. Wheel Chocks					
37. Jack/Lug Wrench					
38. N.U.S.					
Pump Package					
1. Water Tank Full					
2. Valves					
3. Coolant					
4. Oil Level					
5. Fuel Tank Full					
6. Air Cleaners					
7. 5 Minute Warmup					
8. All Gauges					
9. Override Switch					
10. Live Reels					
11. Primer					
12. Foam Proportioner					
Remarks					

# Periodic/Post-Fire

Cab/Chassis				
Differential Oil				
Level				
2. Transfer Case Oil Level				
3. Check Drive Lines				
4. Slack Adjusters				
5. Parking Brake				
6. Air Brake Check				
7. Manual Transmission Fluid				
8. Check N.U.S.				
Pump Package				
Check Service     Log for oil and     filter				
2. Check Pump Motor Mounts				
3. Check Water Tank Mounts				
4. Check Spark Plugs				
5. Fuel Filter				
6. Inspect Drive Belts				
7. Clean/ Change Air Filter				
8. General Appearance				
9. Pump Performance Test				
10. Lubricate Pump Head				
11. Foam Proportioner				
Remarks				

# **APPENDIX B**

Form 1520-35 (August 1976)

#### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Property	Number

ANNUAL MOTOR VEHICLE MAINTENANCE/SAFETY CHECKLIST							Speedometer Reading		
State		District		Type of vehicle					-
LLEM	SATIS- PAC- TORY	UNBAT- BFAC- TORY	CTEM	EATIG- FAC- TORY	UMBAT- ISFAC- YORY	IŢE	м	SATUS- FAC- TORY	UNBAT- ISTAG- TORY
VEHICLE EXTERIOR			ROAD TEST		UNDER VEHICLE (CON)			<del>-</del>	
Peint	1	l	Hand Brake	Ţ		U-Joints	····	Ţ	1
Winch			Foot Brake			Differential		1 -	<del> </del>
Bumper			Steering	<b>1</b> .	†=::-::	Exhaust System		<u>†</u>	
Fenders		<u> </u>	Starter			Mod Flaps		<del> </del>	<del>                                     </del>
Саь		<del> </del>	Transmission	+				<b>-</b> •	
Body, Bad, or Rack			Clutch		i			1	<del>                                     </del>
Tire Carrier		ĺ	Gauges					1	+-
Spare Tire			Noisea	1		,	JNDER HO	φD	
	· · · · · · · · · · · · · · · · · · ·		[		T	Wiring		T	1
				··	-	Heat Valve			+-
						Ignition		1	+-
		<u> </u>				Spack Pluge		-	+-
VEHICLE INTERIOR			UNDER VEHICLE		•	Fuel Lines			
Doors		Ţ <u></u>	Steering Goar			Oil Lines			T
Gless			King Pins			Post Pamp			$\top$
Mirrore			Turn Stops		T	Carburetor		1	$\top$
Wipera			Tie Rod	}	l	Motor Mounts		. —	1
Washers			Axle Joints (4×4)			Rings			· · · · · · · · · · · · · · · · · · ·
Hastet			Cab Mounts			Valves			
Defrosters			Shock Absorbers			Compression Test			
Lights			Suspension			1	2	3   1	14
Tura Signals			Tires			5	6	7	8
Hoen			Wheels			Oil Level		7	1
Best Cushions			Brake Lining			Coolant Level .			
Seat Belts			Brake Cylinders	<b></b> -		Power Steer. I	luid Leve		$\top$
Extinguisher			Broke Lines	_		Brake Plaid			
First Aid Kit			Frame		1	Teamsmission Fiuld			
Jack & Lug Wrench			Leeks		!	Belta			
<del></del>			Axleg			Battery & Cab	le s	1	1
•			Clutch	'	1	Hoses			<del>:</del>
<i>-</i>	<b>.</b>		Transmission		<del>-</del>	·····		1	•
			Transfer Case		1		•		· †·
	<del></del> -	†	Drive Lines		<del> </del>	l·		+	<u> </u>
		_	-1-14HP4					.L.	<u> </u>

Inspected by	•	Dete

# **APPENDIX C**

### **Winterization Checklist**

Drain all pumps, valves, plumbing, foam unit and water tank. Blow out system with compressed air and/or add a small amount of antifreeze and water to low spots.

Date:	Completed By:
-------	---------------

REMARKS AREA





Oil Changed	Wash Motor	
Drain Pump	Change Air Filter	
Grease Pump	Drain Strainer	
Add Gas Additive	Open Valves(or remove)	
Drain Plumbing		

#### FOAM UNIT OR SYSTEM

Flush System	Drain All Lines	
Drain Metering Valve	Drain Selector Valve	
Winterize Bladder	Inspect "O" Rings	

### HOSE REELS

Drain Hose	Drain Reels	
Remove Nozzles	Inspect & Lube Gaskets	

#### **TANK**

Drain & Flush		Remove Plugs	
---------------	--	--------------	--

#### **ENGINE**

Tighten All Bolts	Test Anti-Freeze (-40)
Inspect All Lights	Post Anti-Freeze Degree Reading on Left Headlight
Brake Fluid	Fuel Filter
Anti-Freeze in Wiper Fluid	Check or Change Oil
Oil Filter (if oil changed)	Auto Transmission Fluid
Clean Radiator	Clean or Replace Air Filter
Power Steering Fluid	Inspect Fan Belts
AM/FM Radio Off	2-Way Radio Off
AC & Heater Off	Battery Off

# UNDER CARRIAGE

Transfer Case Fluid	Front Differential Fluid
Rear Differential Fluid	Check and Note any Leaks
Grease all Zerks	Inspect Tie Rods
Inspect Drive Lines	Inspect Springs & Hangers
Inspect Break Pods	Drain Air Tanks
Tire Condition (circle) Poor Fair Good	Pump Package Mounting Brackets

V

### BOXES

Clean, Paint & sharpen Hand Tools	Clean and/or Paint Interior of Boxes	
Clean Fuel Cans & Drip Torches	Fire Extinguisher Serviced & Stored	
Lock Boxes		

## **APPENDIX D**

### PUMP TEST RECORD

Use this form to document all pump tests.

Date	Pump Hours	Max P.S.I.	Max G.P.M.	Operator	Remarks

## **APPENDIX E**

### **REPAIR RECORD**

Use this section as an informal local repair record to document any minor repairs or preventative maintenance completed.

Date	Mileage	Remarks

## **APPENDIX F**

## ' Engine Service Log'

'Engine ''''	Date:		Mileage:	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Pump	Date:		Mileage:	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Engine	Date:		Mileage:	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Pump	Date:		Mileage:	
Pump · · · · · Completed by:	Date:		Mileage:	
			_	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Completed by:	oil G	Oil Filter	Air Filter	Fuel Filter
Completed by:  Next Service Due:	Oil G Date:	Oil Filter	Air Filter  G  Mileage:	Fuel Filter
Completed by:  Next Service Due:  * Engine * * * * *  Completed by:	Oil G Date:	Oil Filter G Oil Filter	Air Filter  G  Mileage:  Air Filter	Fuel Filter  Fuel Filter  G
Next Service Due:  * Engine  Completed by:  Next Service Due:	Oil G  Date: Oil G	Oil Filter G Oil Filter	Air Filter  G  Mileage:  Air Filter  G	Fuel Filter  Fuel Filter  G

## ' Engine Service Log '

' Engine	Date:	Mileage:		
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Pump	Date:		Mileage:	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Engine	Date:		Mileage:	
Completed by:	Oil	Oil Filter	Air Filter	Fuel Filter
Next Service Due:	G	G	G	G
' Pump	Date:		Mileage:	
' Pump · · · · · Completed by:	Date:		Mileage:	
-				
Completed by:	Oil	Oil Filter G	Air Filter	Fuel Filter G
Completed by:	oil G	Oil Filter G	Air Filter G	Fuel Filter G
Completed by:  Next Service Due:  * Engine * • • •	Oil G Date:	Oil Filter G	Air Filter  G	Fuel Filter
Completed by:  Next Service Due:  * Engine * * * * *  Completed by:	Oil G	Oil Filter  Oil Filter  G	Air Filter  G  Mileage:  Air Filter	Fuel Filter  G  Fuel Filter
Next Service Due:  Completed by:  Completed by:  Next Service Due:	Oil G  Date: Oil G	Oil Filter  Oil Filter  G	Air Filter G  Mileage: Air Filter G	Fuel Filter  Fuel Filter  G

## NOTES